

SEQUENCE LISTING

<110> De Vries, Gerald W.

<120> Methods of Extending Corneal Graft  
Survival

<130> P-AR 4951

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<170> FastSEQ for Windows Version 4.0

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<221> CDS

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Tyr Leu Gln Cys Glu Thr Thr Trp Gly Asp Gln Asp Phe Leu Ser Asn  
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Pro Phe Leu Val His Ile Thr Gly Asn Glu Leu Tyr Asp Ile Gln Leu  
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Pro Pro Glu Phe Gln Trp Tyr Lys Asp Gly Lys Ala Leu Ser Gly Arg  
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Lys Glu Ala Ser Ser Pro Ser Ile Tyr Ser Arg His Ser Arg Gln Ala  
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780 785 790

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Val Val Glu Ala Ser Ala Phe Gly Ile His Lys Gly Ser Ser Cys Asp  
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His Arg Asp Leu Ala Ala Arg Asn Ile Leu Leu Ser Glu Ser Asp Val  
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Ile Ser Cys Arg Gly Gln His Pro Leu Glu Trp Ala Trp Pro Gly Ala  
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Gln Glu Ala Pro Ala Thr Gly Asp Lys Asp Ser Glu Asp Thr Gly Val  
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Leu Leu His Glu Val His Ala Asn Asp Thr Gly Ser Tyr Val Cys Tyr  
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Tyr Lys Tyr Ile Lys Ala Arg Ile Glu Gly Thr Thr Ala Ala Ser Ser  
115 120 125  
Tyr Val Phe Val Arg Asp Phe Glu Gln Pro Phe Ile Asn Lys Pro Asp  
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Thr Leu Leu Val Asn Arg Lys Asp Ala Met Trp Val Pro Cys Leu Val  
145 150 155 160  
Ser Ile Pro Gly Leu Asn Val Thr Leu Arg Ser Gln Ser Ser Val Leu  
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Trp Pro Asp Gly Gln Glu Val Val Trp Asp Asp Arg Arg Gly Met Leu  
180 185 190  
Val Ser Thr Pro Leu Leu His Asp Ala Leu Tyr Leu Gln Cys Glu Thr  
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Thr Trp Gly Asp Gln Asp Phe Leu Ser Asn Pro Phe Leu Val His Ile  
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Thr Gly Asn Glu Leu Tyr Asp Ile Gln Leu Leu Pro Arg Lys Ser Leu  
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Ala Glu Arg Gly Lys Trp Val Pro Glu Arg Arg Ser Gln Gln Thr His  
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Thr Glu Leu Ser Ser Ile Leu Thr Ile His Asn Val Ser Gln His Asp  
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Glu Ser Thr Glu Val Ile Val His Glu Asn Pro Phe Ile Ser Val Glu  
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340 345 350  
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Tyr Lys Asp Gly Lys Ala Leu Ser Gly Arg His Ser Pro His Ala Leu  
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Asp Cys Lys Asn Val His Leu Phe Ala Thr Pro Leu Ala Ala Ser Leu  
610 615 620  
Glu Glu Val Ala Pro Gly Ala Arg His Ala Thr Leu Ser Leu Ser Ile  
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Pro Arg Val Ala Pro Glu His Glu Gly His Tyr Val Cys Glu Val Gln  
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Tyr Asp Ala Ser Gln Trp Glu Phe Pro Arg Glu Arg Leu His Leu Gly  
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Met Glu Phe Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala  
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Lys Val Tyr Thr Thr Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu  
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Cys Met Ala Pro Arg Ser Ser Gln Ser Ser Glu Glu Gly Ser Phe Ser  
1185 1190 1195 1200  
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Phe Ser Cys Lys Gly Pro Gly Gln Asn Val Ala Val Thr Arg Ala His		
1300	1305	1310
Pro Asp Ser Gln Gly Arg Arg Arg Pro Glu Arg Gly Ala Arg Gly		
1315	1320	1325
Gly Gln Val Phe Tyr Asn Ser Glu Tyr Gly Glu Leu Ser Glu Pro Ser		
1330	1335	1340
Glu Glu Asp His Cys Ser Pro Ser Ala Arg Val Thr Phe Phe Thr Asp		
1345	1350	1355
Asn Ser Tyr		1360

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<212> DNA  
<213> Homo sapiens

<220>  
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tgtccgggtt cctgtgaggg ttttacctga caccggccgc ctttccccgg cactggctgg 180  
gagggcgccc tgcaaaggta ggaacgcggga gccccggacc cgctcccgcc gcctccggct 240  
cgcccagggg gggtcggccgg gaggagcccg ggggagaggg accaggaggg gcccggcc 300  
tcgcaggggc gcccgcgccc ccacccctgc ccccgccagc ggaccgggtcc cccaccccg 360  
gtccttccac c atg cac ttg ctg ggc ttc ttc tct gtg gcg tgt tct ctg 410  
Met His Leu Leu Gly Phe Phe Ser Val Ala Cys Ser Leu  
1 5 10

ctc gcc gct gcg ctg ctc ccg ggt cct cgc gag gcg ccc gcc gcc 458  
Leu Ala Ala Ala Leu Leu Pro Gly Pro Arg Glu Ala Pro Ala Ala  
15 20 25

gcc gcc ttc gag tcc gga ctc gac ctc tcg gac gcg gag ccc gac gcg 506  
Ala Ala Phe Glu Ser Gly Leu Asp Leu Ser Asp Ala Glu Pro Asp Ala  
30 35 40 45

ggc gag gcc acg gct tat gca agc aaa gat ctg gag gag cag tta cgg 554  
Gly Glu Ala Thr Ala Tyr Ala Ser Lys Asp Leu Glu Glu Gln Leu Arg  
50 55 60

tct gtg tcc agt gta gat gaa ctc atg act gta ctc tac cca gaa tat 602  
Ser Val Ser Ser Val Asp Glu Leu Met Thr Val Leu Tyr Pro Glu Tyr

65

70

75

tgg aaa atg tac aag tgt cag cta agg aaa gga ggc tgg caa cat aac 650  
Trp Lys Met Tyr Lys Cys Gln Leu Arg Lys Gly Gly Trp Gln His Asn  
80 85 90

aga gaa cag gcc aac ctc aac tca agg aca gaa gag act ata aaa ttt 698  
Arg Glu Gln Ala Asn Leu Asn Ser Arg Thr Glu Glu Thr Ile Lys Phe  
95 100 105

gct gca gca cat tat aat aca gag atc ttg aaa agt att gat aat gag 746  
Ala Ala Ala His Tyr Asn Thr Glu Ile Leu Lys Ser Ile Asp Asn Glu  
110 115 120 125

tgg aga aag actcaa tgc atg cca cgg gag gtg tgt ata gat gtg ggg 794  
Trp Arg Lys Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly  
130 135 140

aag gag ttt gga gtc gcg aca aac acc ttc ttt aaa cct cca tgt gtg 842  
Lys Glu Phe Gly Val Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val  
145 150 155

tcc gtc tac aga tgt ggg ggt tgc tgc aat agt gag ggg ctg cag tgc 890  
Ser Val Tyr Arg Cys Gly Gly Cys Cys Asn Ser Glu Gly Leu Gln Cys  
160 165 170

atg aac acc agc acg agc tac ctc agc aag acg tta ttt gaa att aca 938  
Met Asn Thr Ser Thr Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr  
175 180 185

gtg cct ctc tct caa ggc ccc aaa cca gta aca atc agt ttt gcc aat 986  
Val Pro Leu Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn  
190 195 200 205

cac act tcc tgc cga tgc atg tct aaa ctg gat gtt tac aga caa gtt 1034  
His Thr Ser Cys Arg Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val  
210 215 220

cat tcc att att aga cgt tcc ctg cca gca aca cta cca cag tgt cag 1082  
His Ser Ile Ile Arg Arg Ser Leu Pro Ala Thr Leu Pro Gln Cys Gln  
225 230 235

gca gcg aac aag acc tgc ccc acc aat tac atg tgg aat aat cac atc 1130  
Ala Ala Asn Lys Thr Cys Pro Thr Asn Tyr Met Trp Asn Asn His Ile  
240 245 250

tgc aga tgc ctg gct cag gaa gat ttt atg ttt tcc tcg gat gct gga 1178  
Cys Arg Cys Leu Ala Gln Glu Asp Phe Met Phe Ser Ser Asp Ala Gly  
255 260 265

gat gac tca aca gat gga ttc cat gac atc tgt gga cca aac aag gag 1226  
Asp Asp Ser Thr Asp Gly Phe His Asp Ile Cys Gly Pro Asn Lys Glu  
270 275 280 285

ctg gat gaa gag acc tgt cag tgt gtc tgc aga gcg ggg ctt cg<sup>g</sup> cct 1274  
Leu Asp Glu Glu Thr Cys Gln Cys Val Cys Arg Ala Gly Leu Arg Pro  
290 295 300

gcc agc tgt gga ccc cac aaa gaa cta gac aga aac tca tgc cag tgt 1322  
Ala Ser Cys Gly Pro His Lys Glu Leu Asp Arg Asn Ser Cys Gln Cys  
305 310 315

gtc tgt aaa aac aaa ctc ttc ccc agc caa tgt ggg gcc aac cga gaa 1370  
Val Cys Lys Asn Lys Leu Phe Pro Ser Gln Cys Gly Ala Asn Arg Glu  
320 325 330

ttt gat gaa aac aca tgc cag tgt gta tgt aaa aga acc tgc ccc aga 1418  
Phe Asp Glu Asn Thr Cys Gln Cys Val Cys Lys Arg Thr Cys Pro Arg  
335 340 345

aat caa ccc cta aat cct gga aaa tgt gcc tgt gaa tgt aca gaa agt 1466  
Asn Gln Pro Leu Asn Pro Gly Lys Cys Ala Cys Glu Cys Thr Glu Ser  
350 355 360 365

cca cag aaa tgc ttg tta aaa gga aag aag ttc cac cac caa aca tgc 1514  
Pro Gln Lys Cys Leu Leu Lys Gly Lys Lys Phe His His Gln Thr Cys  
370 375 380

agc tgt tac aga cgg cca tgt acg aac cgc cag aag gct tgt gag cca 1562  
Ser Cys Tyr Arg Arg Pro Cys Thr Asn Arg Gln Lys Ala Cys Glu Pro  
385 390 395

gga ttt tca tat agt gaa gaa gtg tgt cgt tgt gtc cct tca tat tgg 1610  
Gly Phe Ser Tyr Ser Glu Glu Val Cys Arg Cys Val Pro Ser Tyr Trp  
400 405 410

aaa aga cca caa atg agc taagattgta ctgtttcca gttcatcgat 1658  
Lys Arg Pro Gln Met Ser  
415

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ccaaacagcc aagattttcc tcttgtgatt tctttaaaag aatgactata taatttattt 1898  
ccactaaaaa tattgtttct gcattcattt ttatagcaac aacaattggg aaaactca 1958  
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<212> PRT  
<213> Homo sapiens

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35 40 45  
Thr Ala Tyr Ala Ser Lys Asp Leu Glu Glu Gln Leu Arg Ser Val Ser  
50 55 60  
Ser Val Asp Glu Leu Met Thr Val Leu Tyr Pro Glu Tyr Trp Lys Met  
65 70 75 80  
Tyr Lys Cys Gln Leu Arg Lys Gly Gly Trp Gln His Asn Arg Glu Gln  
85 90 95  
Ala Asn Leu Asn Ser Arg Thr Glu Glu Thr Ile Lys Phe Ala Ala Ala  
100 105 110  
His Tyr Asn Thr Glu Ile Leu Lys Ser Ile Asp Asn Glu Trp Arg Lys  
115 120 125  
Thr Gln Cys Met Pro Arg Glu Val Cys Ile Asp Val Gly Lys Glu Phe  
130 135 140  
Gly Val Ala Thr Asn Thr Phe Phe Lys Pro Pro Cys Val Ser Val Tyr  
145 150 155 160  
Arg Cys Gly Gly Cys Asn Ser Glu Gly Leu Gln Cys Met Asn Thr  
165 170 175  
Ser Thr Ser Tyr Leu Ser Lys Thr Leu Phe Glu Ile Thr Val Pro Leu  
180 185 190  
Ser Gln Gly Pro Lys Pro Val Thr Ile Ser Phe Ala Asn His Thr Ser  
195 200 205  
Cys Arg Cys Met Ser Lys Leu Asp Val Tyr Arg Gln Val His Ser Ile  
210 215 220  
Ile Arg Arg Ser Leu Pro Ala Thr Leu Pro Gln Cys Gln Ala Ala Asn  
225 230 235 240  
Lys Thr Cys Pro Thr Asn Tyr Met Trp Asn Asn His Ile Cys Arg Cys  
245 250 255  
Leu Ala Gln Glu Asp Phe Met Phe Ser Ser Asp Ala Gly Asp Asp Ser  
260 265 270  
Thr Asp Gly Phe His Asp Ile Cys Gly Pro Asn Lys Glu Leu Asp Glu  
275 280 285  
Glu Thr Cys Gln Cys Val Cys Arg Ala Gly Leu Arg Pro Ala Ser Cys  
290 295 300  
Gly Pro His Lys Glu Leu Asp Arg Asn Ser Cys Gln Cys Val Cys Lys  
305 310 315 320  
Asn Lys Leu Phe Pro Ser Gln Cys Gly Ala Asn Arg Glu Phe Asp Glu  
325 330 335  
Asn Thr Cys Gln Cys Val Cys Lys Arg Thr Cys Pro Arg Asn Gln Pro  
340 345 350  
Leu Asn Pro Gly Lys Cys Ala Cys Glu Cys Thr Glu Ser Pro Gln Lys  
355 360 365  
Cys Leu Leu Lys Gly Lys Lys Phe His His Gln Thr Cys Ser Cys Tyr  
370 375 380  
Arg Arg Pro Cys Thr Asn Arg Gln Lys Ala Cys Glu Pro Gly Phe Ser  
385 390 395 400  
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405 410 415  
Gln Met Ser

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<210> 5  
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<212> PRT  
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<220>  
<223> synthetic construct

<221> VARIANT  
<222> 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13  
<223> Xaa = Any Amino Acid

<400> 5  
Cys Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Cys Xaa Cys Cys  
1 5 10 15

<210> 6  
<211> 13  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> synthetic construct

<221> misc\_feature  
<222> 1, 2, 4, 8, 9, 10, 11, 12, 13  
<223> n = A,T,C or G

<400> 6  
nnnyngucnnn nnn 13

<210> 7  
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<223> synthetic construct

<221> misc\_feature  
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<223> n = A,T,C or G

<400> 7  
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